

C: SYSTEM PROTECTION SUBCOMMITTEE

Chair: T. Seegers

Vice-Chair: R. Hunt

The C System Protection Subcommittee met on Wednesday, September 19th, 2007, in Charlotte, NC with 13 members and 40 guests in attendance.

4 Working Groups and 3 Task Forces met at this meeting. The members of the Subcommittee approved the minutes of the May 2007 meeting.

A significant portion of the meeting focused on the IEEE Standards for Working Groups operating under a PAR. To resolve contentious issues in the Working Group, the WG members must vote, and the vote must be recorded in the meeting minutes. The vote is only official if a quorum (>50%) of members has voted.

The Subcommittee has added Ken Birt, Alla Derojna, and Shinichi Imai as members. Effective with the January 2008 meeting, Rich Hunt will assume the Chair of C Subcommittee, and Solveig Ward will assume the Vice-Chair of C Subcommittee.

The Subcommittee approved the formation of Working Group C14, Use of Time Synchronized Measurements in Protective Relaying Applications. The WG will be Chaired by Jim O'Brien, Vice Chaired by Alla Derojna, and will produce a report to the Main Committee.

The Subcommittee decided not to form a Working Group to discuss issues around connecting IPPs to the transmission system. There was much debate as to the need for such a Working Group.

NERC liaison report: The NERC liaison report is being moved to the Main Committee meeting.

PSCE liaison report: nothing to report.

PSSC liaison report: The task force on blackouts has completed the report. The report is 245 pages, and is available as a special publication of the IEEE.

Cyber Security: Solveig Ward provided an update from the NERC UTC meeting. NERC has issued the cyber security standard, and is being reviewed by FERC. Members can make comments until October 8, 2007. The standard is to be published by the end of 2007. Utilities must be compliant by June 2008, and fully compliant by December 2008. Audits will begin in 2009. The statement "when not technically feasible" – when used for compliance, the reason must be documented.

Reports from the WG Chairs

C4: Global Industry Experience with System Integrity Protection Schemes

Chair: V. Madani

Vice-Chair: M. Begovic

WG C-4 met on September 18 in one session with total 19 in attendance (9 M, 10 G).

After review of the patent slides, the members discussed summary and samples of the surveys received. The WG had requested a 3 months extension for the survey results at the May 2007 meeting. The extension was granted and result of the extension is a significant increase in number of respondents. The overall number of respondents to date is around 75 and increasing – Many of the international respondents are representing their countries (CIGRE or ISOs acting on behalf of the Asset owners). The total number of schemes reported exceeds 500 (In May 2007, we reported approximately 300 schemes).

Vahid mentioned that of all the responses received, no one has mentioned ambiguity in the questions or that the respondent needed further clarification or information.

The next step is to start tabulating the responses. Vahid has volunteered to determine if there is a simple way to extract the data into a spreadsheet. Five members volunteered to assist in extracting responses from the survey based on the attempt to convert the survey responses and to help validate the entries for the responses received.

C9: Appl. of Prot. Relays used for Abnormal Freq. Load Shed. & Restoration

Chair: A. Apostolov

Vice-Chair: K. Behrendt

WG C-9 met on September 18 in a single session. The WG discussed the progress of the summary transactions paper.

C11: Guide for Protection System Testing

Chair: V. Madani

Vice-Chair: H. DoCarmo

WG C-11 met on September 18 in single session with total 43 in attendance (15 M, 28 G). After review of the patent slides, the WG members reviewed comments from multiple reviewers followed by new contributions on system testing. The following writing assignments were discussed:

- Reviewer Comments Received
- Sect. 2.6.4 Updated Dynamic Simulation Testing
- 4.1.1.2.6 Line Current Differential Scheme
- Sec. 7. Testing Protection and Control Systems with Unconventional Voltage and Current Sensing Inputs

In discussions with the I8 WG (Application of Optical Sensor Systems) and EG C-13 (Undervoltage load shedding scheme), it is also agreed that system testing will address these two from protection scheme and scheme performance perspectives. The C-11 WG members have the knowledgeable people as WG members that can make the contributions.

For the next meeting, the C-11 WG members will finalize all comments received and will form the balloting body.

C12: Performance of Relaying During Stressed Conditions

Chair: D. Novosel

Vice-Chair: G. Bartok

The Working Group met on Tuesday, September 18, 2007 with 10 members and 22 guests present. The meeting was chaired by George Bartok, the WG Vice Chair.

Prior to the meeting, Draft 9 of the Working Group Report was distributed to the members and guests on the mailing list. This draft includes all additional writing assignments and contributions since the May meetings as well as a complete document review by four WG members.

Several additional writing and review assignments were made. Most of these are for the purpose of further reducing the length of the WG report and making it more focused on the WG scope. The report is currently 95 pages in length. All writing and review assignments are due by November 20th.

C13: Undervoltage Load Shedding

Chair: A. Buanno

Vice-Chair: S. Imai

Working Group C13 did not meet at the September meeting in Charlotte. Work is proceeding on the first draft of the WG report.

CTF14: Use of Time Synchronized Measurements in Protective Relaying Applications

Chair: J. O'Brien

Vice-Chair: A. Deronja

Task Force CTF14 met on September 18, 2007, in Charlotte, NC, in a single session chaired by Jim O'Brien with 38 people in attendance with 15 of those interested in membership to finalize the need and scope of the future working group.

The working group formation has been approved. Its assignment will be as follows:

Produce a general report to PSRC Subcommittee C outlining practical relaying applications using time synchronized measurements.

The output will be a report.

The WG scope is presently defined as follows:

Develop a report that identifies time synchronized measurement data and parameters that are useful for developing relay settings, improving protection schemes and analyzing protective relay performance. The report will not include deployment of devices to acquire time synchronized measurements.

A discussion included questions on time synchronizing, C37.118, and 61850. It has been or being done outside of this group and, therefore, excluded from the scope but may be referenced in the report.

It was proposed to limit the topic to using the time synchronized measurements for the protective relaying applications focusing on wide area and transmission system protection. Other various topics concerning application of the time synchronized measurements can be addressed later and separately.

Possible items for the report outline include history of the use of the time synchronized measurements in protective relaying applications, future applications, and reliability of the communications infrastructure.

The chair asked the members to notify him by e-mail of presentation topics, which will be conducted on the future meetings in January and/or May, 2008.

CTF15: Testing and Design of SIPS

Chair: Y. Hu

Vice-Chair: R. Cummings

Task Force CTF-15 met on Wednesday, September 19, 2007 in single session with total 19 people in attendance. The task force discussed the need to form a working group to develop a report on the SIPS testing and design. The discussion had concluded with the followings:

- There is a need to have a good understanding of the current status of testing procedures and methods used to test SIPS. This will provide a basis for assessing the adequacy of current practice, and possibly for developing future IEEE guidelines or standards to guide the SIPS testing
- WG C-4 is conducting a survey on the global experience of SIPS applications, its results should be used for defining the scope of this future working group
- WG C-11 is working on producing a Guide for Power System Protections, which had included the testing of some SIPS schemes. The scope of this working group should take the results of C-11 into consideration
- C subcommittee had done some previous work in the wide-area protection area, the results of these work should be reviewed for defining the scope of this working group

CIGRE had produced several documents related to SIPS, these documents should be reviewed for defining the scope of this future working group

The Task Force CTF-15 has decided to hold one more meeting in January 2008 to define the scope and the product of this future working group. Task force chair will take the lead to prepare a straw man statement and present it at the next meeting.

CTF16: Relay Scheme Design for Modern Relays

Chair: K. Birt

Vice-Chair: R. Lascu

CTF16, Relay Scheme Design for Modern Relays, met for the first time on Tuesday, September 18, 2007. There were 58 people in attendance.

There was considerable discussion about topics that should be included in the project scope if a working group is formed.

The group decided to meet again in January, to decide whether or not to form a working group. Before that meeting, participants are expected to review the 1999 PSRC report, "Relay Trip Circuit Design," which is on the PSRC web site. Participants are requested to email suggestions for topics to include in the scope to Ken Birt.

After the meeting, Raluca Lascu agreed to serve as vice chairman.